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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/603,858	06/26/2003	Sentaro Sugita	239656US3	1470
22850	7590	03/17/2006	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.			JOYCE, WILLIAM C	
1940 DUKE STREET			ART UNIT	
ALEXANDRIA, VA 22314			PAPER NUMBER	

3682

DATE MAILED: 03/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/603,858	Applicant(s) SUGITA, SENTARO	
	Examiner William C. Joyce	Art Unit 3682	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 December 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) 7 and 8 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 June 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This Office Action is in response to the Election filed December 29, 2005 for the above identified patent application.

Election/Restrictions

1. Claims 7-8 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected group, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on December 29, 2005.
2. Applicant's election with traverse of Group I0 in the reply filed on December 29, 2005 is acknowledged. The traversal is on the ground(s) that the PTO has not carried forward its burden of proof to establish distinctness. This is not found persuasive because an invention is considered distinct if the product as claimed can be made by a materially different process. See MPEP 806.5 (f). The requirement is still deemed proper and is therefore made FINAL.

Priority

3. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Japan on June 26, 2002. It is noted, however, that applicant has not filed a certified copy of the Japanese application as required by 35 U.S.C. 119(b).

Drawings

4. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "separators" (claim 5) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

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The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claim 4 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The limitation "the deflectors" lacks proper antecedent basis.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by Edwards (US Patent 3,143,896).

Edwards illustrates a ball screw device comprising: a nut (14) with a first thread groove, a screw (10) shaft having a second thread groove, a plural number of balls (18) between the first thread groove and the second thread groove, and a deflector (20) built into the nut to provide a ball-return path which returns the balls so as to circulate endlessly, wherein the deflector comprises a deflector piece (24) defines a top plate of the ball-return path and a guide member (26) which defines sidewalls of the ball-return path.

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9. Claims 1, 2, and 3 are rejected under 35 U.S.C. 102(b) as being anticipated by Wilke (US Patent 3,771,382).

Wilke illustrates a ball screw device comprising: a nut (1) with a first thread groove, a screw (15) shaft having a second thread groove, a plural number of balls (14) between the first thread groove and the second thread groove, and a deflector (2) built into the nut to provide a ball-return path which returns the balls so as to circulate endlessly, wherein the deflector comprises a deflector piece defines a top plate (4 or 5) of the ball-return path and a guide member which defines sidewalls (4a) of the ball-return path.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over either Edwards (US Patent 3,143,896) or Wilke (US Patent 3,771,382) in further view of Millns (US Patent 2,468,506).

Neither Edwards or Wilke teach the screw arrangement having a plurality of deflectors spaced at equal intervals in a circumferential direction. The prior art to Millns illustrates two transfer passages (d,e) being spaced 180 degrees in a circumferential direction. It would have been obvious to one of ordinary skill in the art at the time the

invention was made to modify the screw arrangement of either Edwards or Wilke with two transfer passages spaced 180 degrees in a circumferential direction, as taught by Millns, motivation being to provide multiple ball paths so as to increase the operating capacity of the device.

12. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over either Edwards (US Patent 3,143,896) or Wilke (US Patent 3,771,382) in further view of Shirai et al. (US Patent 6,513,978).

Neither Edwards or Wilke teach the screw arrangement having a plurality of separators, however it was notoriously known in the art to use separators in a ball screw. For example, the prior art to Shirai et al. teaches a plurality of separators for a ball screw. It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the screw arrangement of either Edwards or Wilke with separators, as taught by Shirai et al., motivation being to reduce the noise caused by the circulating balls.

13. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over either Edwards (US Patent 3,143,896) or Wilke (US Patent 3,771,382) in further view of Walter (US Patent 4,235,122).

Neither Edwards or Wilke teach the screw arrangement configured with a nut housing or an elastic member. The prior art to Walter teaches a ball screw device comprising a nut housing (8) that the nut is inserted therein, and an elastic member (9)

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which is provided on an outer surface of the guide member (3), and the elastic member is engaged with an inner surface of the nut housing to fix the guide member to the nut.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify either Edwards or Wilke with a nut housing and an elastic member, as taught by Walter, motivation being to better support the deflector to the nut.

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Note the deflector of Cochrane ('777), Gagne ('030), Brusasco ('621), Brusasco ('436), Benton ('118), and Matsumoto et al. ('434).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William C. Joyce whose telephone number is (571) 272-7107. The examiner can normally be reached on Monday - Thursday 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Ridley can be reached on (571) 272-6917. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


William C. Joyce 3/10/06